Abstract

A system and method for producing software code is provided. In particular, a new software design methodology is provided that is based on axiomatic design theory. In one aspect, axiomatic design theory is adapted for use in designing object-oriented software programs. This methodology overcomes the shortcomings of various software design strategies including extensive software development and debugging time and the need for extensive maintenance. Because traditional software design strategies are not heuristic and do not provide basic principles for the development of good software systems, bad design habits produce poor quality software. A design framework using axiomatic design for software overcomes many of the shortcomings of current software design techniques: high maintenance costs, limited reusability, the need for extensive debugging and testing, poor documentation, and limited extensibility of the software, all of which result in high development cost of software.